DETERMINATION OF COCCIDIOSTATIC RESIDUES IN MUSCLE TISSUE OF BROILERS BY HPTLC AND HPLC METHODS

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The paper presents results of the HPTLC and HPLC determination of ionophore antibiotic (Salinomycine) and Amprolium residues in samples of broiler meat from commercial sale.

Extraction of salinomycine from samples of broiler muscle tissue was carried out with isooctane, followed by extract purification on silica-gel column and elution of salinomycin residues with methyl-chloride/methanol mixture (9/1, v/v). The amprolium is extracted from tissues with methanol, followed by extract purification by chromatographic separation on a XAD-2 column and elution of amprolium residues with methanol.

The HPTLC determination of salinomycine residues was accomplished on a Kieselgel 60G. The indentification of chromatographic spots was performed by spraying the HPTLC plates with a p-anisaldehyde solution. The chromatographic spots were detected under UV light at 366 nm. Determination of amprolium was performed on Silufol UV_{254} with UV detection at 254 nm.

The HPLC determination of salinomycine residues in prepared tissue was accomplished by derivatisation of a fluorescent detector. The HPLC determination of amprolium residues was accomplished on a Bio Sil C-18 HL 5 μm column with a mobile phase consisting of 0,2 mol/dm^3 aqueous solution of KH_2PO_4 – acetonitrile – H_3PO_4 (60:40:0,3, v/v/v), using a UV detector at 270 nm.

The recovery test was carried out by adding standard solutions in concentrations from 0,005 to 0,20 ppm of meat samples. The recovery rates for the HPTLC and HPLC methods were over 80% and over 90% respectively.

Keywords: meat, residues, coccidiostatics, chromatgraphy.